Crest Neighborhood CSS

Engineering 101

Location & Topographic Survey

Engineering 101 - Intro

Engineering 101 Topics:

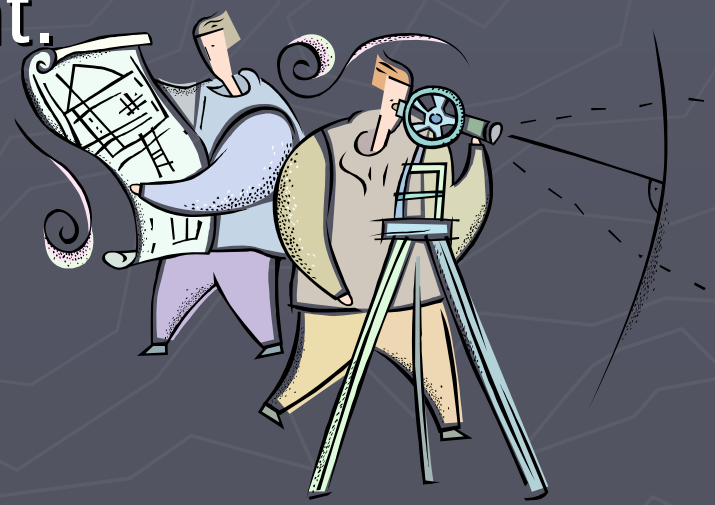
- Location & Topographic Survey
- Stormwater & Environmental Impacts
- Geometric Design

These topics will be covered over the next three meetings (including tonight).

Survey

DEFINITION

Obtaining data concerning the terrain upon which the road will traverse and to determine the economical siting of an alignment.



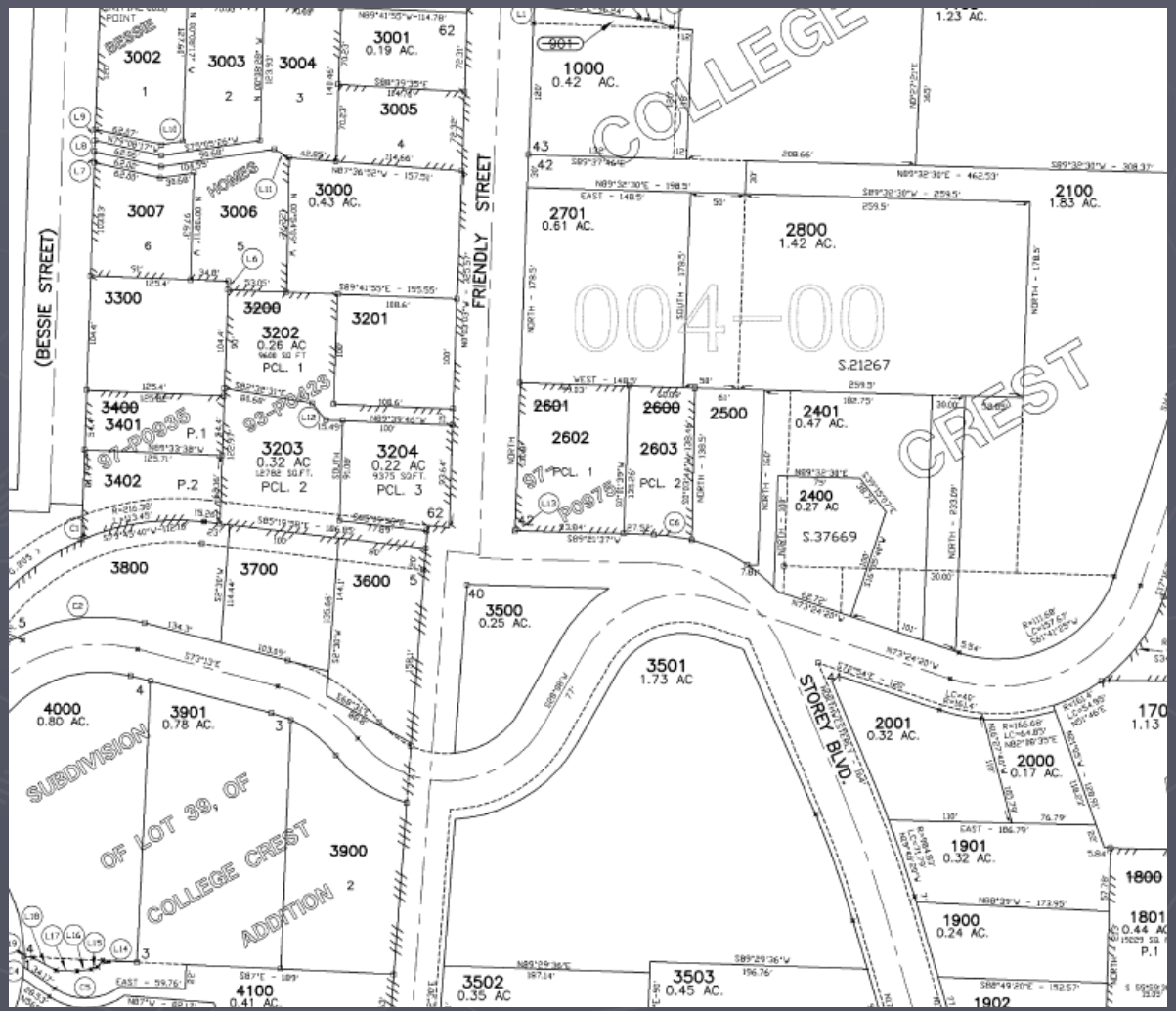
Survey

There are four basic steps to the survey process:

(1) Background research
(2) Reconnaissance Survey
(3) Location Survey
(4) Topographic Survey

Survey

(1) Office study of existing information.



(Assessor's Map 18-03-07-22)

Survey

(2) Reconnaissance Survey

Survey

(3) Location Survey

- Set Control
- Locate Property Corners
- Research Utility Locations (and have them marked in the field)


09/16/2004

Survey

(4) Topographical Survey

- a.k.a. “Physical Survey”
- Using high tech equipment with onboard computers systems that use light waves and prism mirrors to measure distances. GPS satellites may also be used for large area control surveying.
- A complex code is used to input data into the equipment that is translated by computer software into a map.


CAUTION


DEERE

Survey

(4) “Topo” Survey, continued

- Measures the horizontal and vertical (elevation) distances of the selected features. These measurements are used to compute angles and distances to model the terrain.
- Survey “Code” Book Survey Code Book 1-7-00 RDE.xls

Survey

(4) “Topo” Survey (continued)

- The standard is to pick up all features located within the right of way.

Survey

Survey

Some basic terminology

- Point
- Control
- Station
- Topography or “Topo”
- Monumentation
- Stake or pin

Survey

Where are we in the process?

- ✓ Performed reconnaissance survey (CDCT)
- ❑ City surveyors to perform background research
- ❑ City surveyors to perform location and topo survey